The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JOSEPH H. HOFFMAN,
STEPHEN A. KRAUS,
MICHAEL SCOTT BURNETT
and CHRIS MASON

Appeal No. 2004-2234
Application No. 09/881,361

ON BRIEF

Before COHEN, MCQUADE, and NASE, Administrative Patent Judges.

MCQUADE, Administrative Patent Judge.

DECISION ON APPEAL

Joseph H. Hoffman et al. originally took this appeal from the final rejection of claims 1 through 19, all of the claims pending in the application. On February 19, 2004, we remanded the application to the examiner to correct a deficiency in the record. The application is now back before us for review of the appeal on its merits.

THE INVENTION

The invention relates to "golf clubs and related methods in which the club head incorporates an added weight component to

provide the head with a desired weight" (specification, page 1).

Representative claim 1 reads as follows:

1. A golf club comprising:
a head having a heel end, a toe end, and a ball-striking face, wherein the heel end includes a hosel that defines a generally cylindrical cavity;
a hosel plug sized to fit into a lower end of the hosel cavity; and
a shaft having a lower end sized to fit into, and be secured to, the hosel cavity, at a location above the hosel plug;
wherein the hosel plug comprises a mixture of a metallic powder and a compliant polymeric material, in prescribed relative proportions, and wherein the hosel plug is sized to fit snugly into the lower end of the hosel cavity, where it is secured in place by compression of its compliant polymeric material.

THE PRIOR ART

The references relied on by the examiner to support the final rejection are:

Kochevar	4,220,336	Sep. 2, 1980
Yoneyama	4,667,963	May 26, 1987
Sasamoto et al. (Sasamoto)	5,348,302	Sep. 20, 1994
Bingman	5,452,890	Sep. 26, 1995
Allen	5,888,148	Mar. 30, 1999
Shimazaki, Japanese Patent Document	9-248355	Sep. 22, 1997
Tarlow et al., (Tarlow) International Patent Document	WO 00/62873	Oct. 26, 2000

THE REJECTIONS

Claims 1, 3, 4, 6, 8, 9, 11, 15, 17 and 18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Shimazaki in view of Kochevar and Tarlow.

Claims 2, 13 and 14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Shimazaki in view of Kochevar, Tarlow, Yoneyama and Sasamoto.

Claims 5 and 12 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Shimazaki in view of Kochevar, Tarlow and Bingman.

Claims 7 and 10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Shimazaki in view of Kochevar, Tarlow and Allen.

Claims 16 and 19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Shimazaki in view of Kochevar, Tarlow, Yoneyama, Sasamoto and Allen.

Attention is directed to the main and reply briefs (filed April 11, 2003, July 24, 2003 and June 1, 2004) and to the main and supplemental answers (mailed May 19, 2003 and March 31, 2004) for the respective positions of the appellants and the examiner regarding the merits of these rejections.[1]

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[1] In response to the above noted remand, the examiner obtained and appended to the supplemental answer an English language translation of the Shimazaki reference. Also, although the examiner's statement of the first rejection in the final rejection and the answers does not refer to claims 17 and 18, the record indicates that the omission was inadvertent and recognized as such by the appellants.

DISCUSSION

Shimazaki, the examiner's primary reference, discloses a system for adjusting the swing balance of a golf club. Of particular interest is the embodiment illustrated in Figures 1 and 2:

> [a]s in a first embodiment as shown in Fig. 1, hosel part 2 is provided on head body 1, and shaft 4 is inserted in inserting hole 3 of hosel part 2. Lower hole 10 extended to the sole 1A side of head body 1 is formed apparently on an extended line of inserting hole 3 of hosel part 2. Balance adjusting weight 11 is then provided inside lower hole 10. In the embodiment, inserting hole 3 and lower hole 10 are continuously provided, and the diameter of lower hole 10 is made slightly smaller than that of inserting hole 3. The diameters of inserting hole 3 and lower hole 10 can also be equivalent without any problem. Fig. 2 illustrates weight 11 and shaft 4 attached to each other. Reference number 12 refers to a socket. An adhesive is poured in inserting hole 3 and lower hole 10 in advance as similar to as in prior art golf clubs. Both weight 11 and the tip of shaft 4 are adhered in the respective holes with the adhesive. The following four types of weights at the following weights are prepared: a plastic weight at 0.5 g; an aluminum alloy weight at 1.0 g; a stainless [steel] weight at 2.0 g; and a lead weight at 3.0 g. These weights are formed as cylinders of an equivalent volume and shape and selected according to the swing balance to be adjusted [translation, page 3, paragraph 0007].

With regard to the balance adjusting weights, Shimazaki additionally teaches that

> [w]eights 11 can be formed using an equivalent material alone or various materials by a combination when they are fixed. The following materials at the following specific gravities are also utilized other

> than the aforementioned materials: copper (8.93 specific gravity); iron (7.64 specific gravity); zinc (7.14 specific gravity); and titanium (4.5 specific gravity). Weights 11 are not limited in the solid form, but they can also be in a powder form such as a tungsten powder or the like [translation, page 3, paragraph 0010].

As conceded by the examiner (see page 4 in the main and supplemental answers), Shimazaki does not respond to the limitations in independent claim 1, or the corresponding limitations in independent claims 8 and 16, requiring the hosel plug to comprise a mixture of a metallic powder and a compliant polymeric material in prescribed relative proportions wherein the hosel plug is sized to fit snugly into the lower end of the hosel cavity where it is secured in place by compression of its compliant polymeric material.[2] To supply these deficiencies, the examiner looks to Kochevar and Tarlow.

Kochevar discloses a system for accurately weighting a golf club by adding a weight capsule 11. The capsule consists of a weight composition mass 13 at least partially encased within a readily deformable or tearable sheath 15. The mass 13 has a putty-like consistency which allows the capsule to be

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[2] The term "its compliant polymeric material" in claim 16 lacks a proper antecedent basis. This informality should be corrected in the event of further prosecution before the examiner.

compressively loaded and permanently deformed into place when positioned within a golf club shaft proximate the hosel of the club head. When compressively loaded and permanently deformed, the capsule remains in the desired position by a mechanical interlock and/or by adhesion (see column 4, lines 19 through 46). According to Kochevar,

> [a]lthough various materials having the requisite properties can be utilized for forming the mass 13, it is preferred to utilize particulate material held together with a binder. The particulate material is preferably relatively heavy and may be powdered metal, such as powdered lead. The quantity of particulate matter can be varied depending upon the desired density of the mass 13.
>
> The binder may include virtually any deformable material which will hold the particulate material together. Of course, the binder should be readily manually deformable. One suitable type of binder possessing these properties is beeswax. Of course, the quantity of binder must be sufficient to bind together all the particulate matter.
>
> If it is desired that the mass 13 have adhering qualities, it should also contain a sticky or adherent material. One such material is polyisobutylene [column 5, lines 36 through 53].

Tarlow discloses an insert for incorporation into a golf club shaft proximate the club head to reduce twisting of the head relative to the shaft. The insert may consist of "a plastic, rubber, or another suitable polymer material" (page 4, line 27) which can be either friction fitted within the shaft or affixed thereto with an adhesive (see page 12, lines 9 through 11).

In proposing to combine Shimazaki, Kochevar and Tarlow to reject independent claims 1, 8 and 16, the examiner concludes that it would have been obvious to one of ordinary skill in the art (1) to replace Shimazaki's weight 11 with a plug made of a deformable binder and a metal powder in view of Kochevar "in order to simplify the assembly process by deforming the shape to fit a cavity instead or requiring more precise dimensions to ensure proper fitting" (main and supplemental answers, page 5) and (2) to make such binder from a compliant polymeric material which can be compression fitted into place in view of Tarlow

> in order to have a plug which returns to the original form when a stress is removed so that the plug is more easily handled and stored without deteriorating, in order to have a clean method of fixing a plug to a cavity without the use of an adhesive, and in order to be able to temporarily fix a plug to a cavity [main and supplemental answers, page 5].

In responding to the arguments advanced in the appellants' briefs, the examiner seems to take the additional approach that the foregoing application of Tarlow "was not really needed" (main and supplemental answers, page 11) because Kochevar discloses "a binder containing a polymeric material in the form of polyisobutylene . . . which is compliant in that it can be compressively loaded . . . and is deformable" (main and supplemental answers, page 11).

As indicated above, independent claims 1, 8 and 16 require the hosel plug to comprise a compliant polymeric material and to be sized to fit snugly into the hosel cavity where it is secured in place by compression of the compliant polymeric material. Whether read on its face or in light of the underlying specification,[3] this limitation calls for the hosel plug to be secured in place by virtue of its compliant polymeric material being in a state of compression. Kochevar contains no suggestion that the capsule 11 disclosed therein is secured in this manner. To the contrary, Kochevar teaches that the capsule, by virtue of its permanently deformable putty-like polyisobutylene weight mass 13, is secured by a mechanical interlock and/or by adhesion. Thus, even if Shimazaki's weight 11 were replaced with Kochevar's capsule 11 of polyisobutylene and a metal powder, the result still would not meet the foregoing claim limitations.

The examiner's additional reliance on Tarlow in this regard is not well founded. Although the Tarlow insert is secured in place by a friction fit which is apparently produced by compression of its flexible polymeric material, the only

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[3] The appellants' specification states that "[i]n the plug's installed position, the compliant polymeric material is slightly compressed, to secure the plug in place by an interference fit" (page 7).

suggestion to replace Shimazaki's weight 11 with a plug made of polyisobutylene and a metal powder in view of Kochevar and to further replace Kochevar's putty-like, permanently deformable polyisobutylene with a flexible polymeric material of the type disclosed by Tarlow stems from hindsight knowledge impermissibly derived from the appellants' disclosure.

As Yoneyama, Sasamoto, Bingman and/or Allen fail to cure the foregoing shortcomings of the basic Shimazaki, Kochevar and Tarlow combination, we shall not sustain the standing 35 U.S.C. § 103(a) rejection of independent claims 1 and 8, and dependent claims 3, 4, 6, 9, 11, 15, 17 and 18, as being unpatentable over Shimazaki in view of Kochevar and Tarlow, the standing 35 U.S.C. § 103(a) rejection of dependent claims 2, 13 and 14 as being unpatentable over Shimazaki in view of Kochevar, Tarlow, Yoneyama and Sasamoto, the standing 35 U.S.C. § 103(a) rejection of dependent claims 5 and 12 as being unpatentable over Shimazaki in view of Kochevar, Tarlow and Bingman, the standing 35 U.S.C. § 103(a) rejection of dependent claims 7 and 10 as being unpatentable over Shimazaki in view of Kochevar, Tarlow and Allen, or the standing 35 U.S.C. § 103(a) rejection of independent claim 16, and dependent claim 19, as being

unpatentable over Shimazaki in view of Kochevar, Tarlow, Yoneyama, Sasamoto and Allen.

SUMMARY

The decision of the examiner to reject claims 1 through 19 is reversed.

REVERSED

IRWIN CHARLES COHEN)
Administrative Patent Judge)
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) BOARD OF PATENT
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JOHN P. MCQUADE) APPEALS AND
Administrative Patent Judge)
) INTERFERENCES
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